

North American types as the subgenera *Polygyra* and *Mesodon* of *Helix* (*H. jejuna*, No Name Key; *H. pustula*, Cedar Keys; *H. carpenteriana*, Key Biscayne; *H. cereolus*, Indian Key, Key West, Egmont Key; *H. septemvolva*, Key West; *H. oppilata*, Cedar Keys (but this is also a Yucatan species); *H. uvulifera*, plentiful on several Keys; *H. auriculata*, Cedar Keys).

How far the birds of Tropical Florida agree with those of the Sonoran region I do not know, having no list at hand from which to glean the facts; but inasmuch as they must greatly exceed nineteen, the number of Antillean forms quoted by Dr. Merriam, it is apparent that the character of the air-fauna cannot be so totally different from that of more northern regions as to justify the proposal to merge it in a different primary faunal division. Dr. Merriam gives a list of the birds which are supposed to be restricted to Southern Florida, comprising two species and seven sub-species; this list emphatically confirms the view that the region in question is really North American (Sonoran), for of the two species, one belongs to a genus which does not occur in the West Indies, and the other to a North American genus which has no endemic West Indian species. The seven sub-species are all of North American species, and three of them belong to genera (*Melagris Cyanocitta*, *Sitta*) which do not exist in the West Indies.

To sum up, the facts seem to be as follows:—The whole of Florida really belongs to the eastern division of the Nearctic region (or to the Sonoran region of Dr. Merriam), but along the southern coast, on land of comparatively recent origin, a number of West Indian forms have appeared, owing to the assistance of currents conveying floating trees, &c., and to the proximity of Cuba and the Bahamas, which has permitted many birds and insects to fly across. These immigrants have formed a distinct colony, but not to any great extent, so far as can be learned, at the expense of the native fauna. The recent appearance of this colony is shown by the fact that (except somewhat doubtfully in the case of a few mollusca) there is at present no tendency to form new endemic species. Mr. Schwarr, who was so impressed with the great number of West Indian insects he found in this region, specially mentions that there were *no endemic forms*.

The northward spread of this colony has doubtless been largely prevented by climate, as stated by Dr. Merriam; but doubtless also quite as largely owing to the *competition of the Sonoran fauna*, for, as Dr. Merriam has himself put it in another connection, "the sustaining capacity of a region is limited; hence such a thing as overcrowding, in the sense of greatly increasing the number of organisms a region can support, is an impossibility."

If climate had been the only barrier, then Tropical Florida should have a fauna like that of Cuba; but so far from doing so, it is still essentially Nearctic, notwithstanding the existence of a very important and interesting West Indian colony. At best it is a transition region.

Under the guidance of Dr. Merriam, researches into the geographical distribution of North American birds and mammals are being energetically carried on; and if I am not mistaken in the above-stated opinions, no doubt information will in due course accumulate that will cause him to withdraw from the position here criticized, and to admit that Dr. Wallace was, in the main, perfectly correct.

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July 31.

"A NEW SECT OF HERO-WORSHIPPERS."

UNDER this title, the *Japan Mail* describes a curious Society, established in Japan, in honour of Isaac Newton, and which is not a new scientific association so much as a new cult. The day of all the year to the members is Christmas Day, being that on which in 1642 the immortal Newton was born. The constitution is of the simplest. The professors, graduates, and students of the mathematical, astronomical, and physical classes of the Tokio University are *ex officio* members; once a member always a member; and there are no others. The Society was launched as one for undergraduates by Messrs. Fujisawa, Tanaka, and Tanakadate, the first brilliant triumvirate of mathematical graduates which the Tokio University gave to the world. In its early days it met in the students' dormitory. But as the undergraduates developed into graduates and assistants, the

professors themselves were drawn into the fold, and a more suitable assembly hall was found in the University Observatory. Now, however, that building is devoted to seismological pursuits. At Christmas, 1890, or Newtonmas, 248, for the first time, the members of the *Newtonkai*, or Newton Association, met in the Physical Laboratory of the Imperial University, to hear each other talk, to distribute appropriate gifts, and to lengthen out the small hours with laughter and good cheer. The Society has no President: a portrait of the august Sir Isaac presides over the scene. It keeps no written records, no minutes; but its traditions are simple, and easily handed down from year to year. The entertainment provided is the work of the second-year students, assisted by those of the first year. Each professor is expected to make a little speech, which is sometimes historical, sometimes whimsical, as the individual spirit may prompt; but it must not be suggestive of the background of a blackboard. The meeting in fact is essentially social; and in the preparation of the magic lantern slides, the committee of management lay themselves out for frolic and jest. The picture may represent a comical incident familiar to most of the members, or it may be a pictorial conundrum to guess. It was a fine humour, for instance, which gave a caricature of one student notorious for his indefatigable asking of questions. This youth was shown labouring under a shoulder beam, from which hung two buckets filled to overflowing with points of interrogation; while in the background was seated one of the professors, perfectly aghast as this mathematical labourer approached with his load. After the magic lantern exhibition comes the lottery for presents. This is a great feature, productive of much merriment. Each person draws a paper, which may be blank, but usually has a name on it. This name may be one of the illustrious living, or the still more illustrious dead. Corresponding to each name is an article, which, with all solemnity, is presented to the holder of the paper. The connection between the article and the name is more or less symbolic, or it may rest on a far-fetched pun, to which the Japanese language readily lends itself. Usually the jokes are very technical; but occasionally they appeal to a circle more wide than mathematical. Thus the drawer of "Newton" got an apple, and the drawer of "Franklin" a kite. "Herschell" (Sir John) was represented by a sprig of *Nanten* ("southern heavens," which he surveyed); "Archimedes," by a naked doll supposed to be returning from the bath; while the holder of "Kant-Laplace," got a puff of tobacco smoke blown in his face, symbolic of the nebular hypothesis. Some time ago it was pointed out by a European member of the *Kai* that in holding the "Newtonmas" on Christmas Day the members were guilty of a chronological crime hardly to be excused in men trained in the accurate school of Newton. For although he was registered as being born on Christmas Day, 1642, it was Christmas Day, old style. In all strictness he was born on January 5, 1643. But the great convenience of having the *fête* at the beginning rather than towards the end of the winter vacation, and the avoidance of clashing with Japanese New Year festivities, were sufficient to outweigh all other considerations whatsoever. Besides, did not Newton himself hold his birthday on Christmas Day? Why, then, should his admirers hold it on any other? After all, concludes the Yokohama journal, the peculiar interest of the "Newtonmas" lies in its existence. Only to the hero-worshipping Japanese has it occurred thus to pay honour to the memory of the greatest mathematical sage of all time. Very few English-speaking naturalists, to use the word in its widest and legitimate sense, are even aware that Christmas Day in 1642 beheld the birth of Newton. It is possible that nearly fifty years ago a bicentenary *fête* was held in Cambridge; and it is very probable that about fifty years hence Newton's tercentenary will be celebrated in England—perhaps over all the civilized world. But an annual celebration by a Newton Club outside Japan is a thing not to be dreamed of, unless Japan influences the hero-worshipping instinct of the Western people as profoundly as she has influenced their æsthetic taste.

SCIENTIFIC SERIALS.

Royal Society of Victoria, Vol. 3 (N.S.), *Proceedings*, Part I. contains Notes on West Australian oology, by A. J. Campbell (Pls. 1 and 2); On some Victorian fishes, with descriptions of *Cristiceps wilsoni*, *C. phillipi*, *Syngnathus phillipi*, and *Trip-*

terygium macleayanum (Pl. 3) by A. H. Lucas; Anthropology in Australia, by A. W. Howitt; On the nomenclature of chick-embryos (Pls. 4-7). Instead of indicating the stages in the development of the chick by the number of hours or days, which is unsatisfactory, as different eggs incubated for the same length of time will frequently be found to contain embryos which have reached quite different stages of development, the stages are marked based upon the external form, and each is designated by a letter of the alphabet. On some Victorian Land Planarians, by Prof. W. B. Spencer (Pls. 11 and 12), enumerates ten species of Geoplane and describes *G. dendyi*, sp. n., and *G. frosti*, sp. n.; all the species are figured in two admirably executed coloured plates. On the movements of the heart of *Hoplocephalus superbus* in and out of the body, by Dr. McAlpine; On a Nematode from the stomach of *Hoplocephalus superbus*, and on a fluke parasitic in the respiratory and alimentary systems of the same. Neither parasites are named but the Nematode (*Ascaris*) is figured on pl. 8. On the presence of amoeboid corpuscles in the liquid discharged from the nephridial apertures and oral papillae of Peripatus, by A. Dendy; On the shell money of New Britain, by R. H. Rickard; On the Dukduk Association of New Britain; Notes on the miocene strata of Jemmy's Point and on the older tertiary at Bairnsdale, by J. Dennant. Some new or little known Polzyoa, by P. H. MacGillivray (Pls. 9 and 10); Notes on the marine rocks underlying Warrnambool, by G. S. Griffiths.

SOCIETIES AND ACADEMIES.

PARIS.

Academy of Sciences, August 29.—M. Duchartre in the chair.—Observations of the new planet M. Wolf, made at the observatory of Paris (west equatorial), by M. G. Bigourdan. From observations of comparison stars, the R.A. of the planet in question on August 27, at 12h. 20m. 33s. p.m. Paris mean time, was 22h. 41m. 24.95s., its apparent declination $-10^{\circ} 25' 51''.8$, and its magnitude 12.5.—Measures of the diameter of Mars, by M. Camille Flammarion. To settle the divergence between the values of the diameters of Mars as predicted by the *Nautical Almanac*, the *Connaissance des Temps*, and Marth's "Ephémérides," measurements were taken with the 24cm. equatorial of the Juvisy observatory, resulting in values ranging from $24''.50$ to $24''.91$. These confirm Marth's calculations, while the other two ephemerides are about $5''$ in excess, based as they are upon Leverrier's tables instead of Hartwig's.—On the solar phenomena observed at the Royal Observatory of the Roman College during the second quarter of 1892, by M. P. Tacchini.—On the bacterian origin of the bilious fever of hot countries, by M. Domingos Freire. A microscopic comparison of the germs of the yellow fever with those of the somewhat similar bilious fever of tropical countries shows that the former is due to a micrococcus, which is round, highly refractive, and easily coloured by fuchsine, methyl blue, &c., whereas the bilious fever is originated by a bacillus which the writer has succeeded in cultivating. It is about nine microns long and three broad. It is motionless, and accompanied by numerous moving spores. Each bacillus undergoes rapid segmentation into two parts, which give rise to terminal spores. It has been found possible to produce the disease in a pig by inoculation.—On the comparative assimilation of plants of the same species, developed in the sun and in the shade respectively, by M. L. Geneau de Lamarlière. A series of quantitative results, showing that under similar external conditions the decomposition of carbonic acid varies in intensity, for leaves of the same species, according to the conditions of development of these leaves; and that the leaves of a species developed in the sun, all other conditions being equal, decompose the carbonic acid of the air more energetically than those developed in the shade.—On the present eruption of Etna, by M. Wallerant. The eruption of 1892, without having the importance of that of 1865, is, from several points of view, superior to that of 1886; the flows of lava are more extended and the craters more numerous. On July 8 the volcano gave its usual warnings. Thick columns of black smoke emerged from the principal crater, and earthshocks were felt as far as Catania. On the following day the eruption began in earnest. Two openings

appeared a short distance apart, one of which only gave off steam, while the other gave rise to a flow of lava which passed westwards of Monte Nero, and which has been called the western stream. It was not till after the flow had ceased that four volcanic cones arose successively from north to south at a distance of about 60m. to the east of this cleft. Another flow of lava passed to the east of Monte Nero, and was called the eastern stream. For about a month the eruption followed its normal course; the lava continued to flow and the cones increased in height. But on August 9 important modifications took place. The ejections diminished and the explosions ceased. It was thought that the disturbance was dying out, but on the 11th such an eruption of steam took place that Etna disappeared entirely in an absolutely opaque cloud. At the same time it was found that the lava, leaving the first tracks, had taken a new path across the vineyards. In the morning of the 12th the opening of a new crater in the line of the preceding ones was found in the act of building up a cone. The previous evening the observers had passed over the same spot and had found small vents giving off vapours, but nothing to indicate the formation of a crater in so short a time. The formation of this crater was accompanied by a complete cessation of the ejections from the second volcanic cone, which had been very violent. The eruption thus seemed to have entered a new stage of development.

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